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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Rolf-Juergen Recknagel

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KENYON & KENYON LLP  
ONE BROADWAY  
NEW YORK, NY 10004

EXAMINER

RAO, SHEELA S

ART UNIT

PAPER NUMBER

2122

MAIL DATE

DELIVERY MODE

10/04/2011

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/566,128	<b>Applicant(s)</b> RECKNAGEL ET AL.	
	<b>Examiner</b> SHEELA S. RAO	<b>Art Unit</b> 2122	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 5) ☒ Claim(s) 6-20 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 6-16 and 18-20 is/are rejected.
- 8) ☒ Claim(s) 17 is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 25 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____.                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____.   | 6) <input type="checkbox"/> Other: ____.                          |

### **DETAILED ACTION**

1. This Office action responds to papers filed on 19 March 2010.
2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 19, 2010 has been entered.
3. Claims 6-20 are pending and presented for examination. Claims 1-5 are canceled and claims 13-20 have been newly added.

### ***Response to Amendment***

4. The objection made to the specification with regard to the reference characters "PPS" and "SG" is withdrawn based upon the explanation of the reference characters given in the response.
5. The rejection of claims 6-10 under 35 USC §102(e) as being anticipated by Ohl et al. (USPAPN US 2005/0068195 A1) is maintained and has been restated below.
6. The rejection of claims 6-12 under 35 USC §102(e) as being anticipated by Otterbach et al. (USPN US 6,943,669 B2) is maintained and has been restated below.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 6-7 and 14-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claims 6 and 16 -- the steps of “dividing” do not present proper nexus between the two steps of dividing, also the first range of values in each of the dividing steps seems to include or compose different aspects of the sensor values without being properly defined;
- Claim 7 -- the “second range of values” is stated as being a variable but the association between the second range and first range of values is not clear as the independent claim from which 7 depends defines the range of values as “a function of a variable”. Essentially, the definition of the first and/or second range of values has not been provided so as to provide support in the instant claims;
- Claims 14-17 -- the transmission of the lower and higher values at higher and lower bit resolutions is claimed but proper nexus between the transmission of the bits and the rest of the claim language is not found.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 6-10 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent Application Publication No. US 2005/0068195 A1 to Ohl et al.

The reference of prior art by Ohl et al. (hereinafter “Ohl”) teaches of a method for transmitting data from at least one sensor to a control unit and anticipates the limitations of the instant invention.

Independent claim 6 sets forth the instant invention as a method for providing digital data transmission of sensor values from a sensor to a control unit, the sensor values generated from characteristics measured by the sensor, comprising dividing the sensor values for data transmission at different resolutions, the sensor values forming a first range of values including successive sensor values; and dividing the first range of values as a function of a variable relevant for the control unit. These elements are taught by Ohl in paragraph [0014] where the dividing of the sensor data into various successive ranges is described. The reference continues to explain how each of the ranges for the values are associated with variables for different aspects as needed for the control unit (see paragraph [0004-0012]). The cited paragraph concludes by

explaining how the data is transmitted at a higher rate, i.e. resolution. In addition, paragraph [0013] explains how it is possible to use different transmission rates and resolutions for the sensor values.

Claim 7 further defines the variable as a second range of sensor values for threshold values of a triggering algorithm for a restraining device, and the sensor values in the second range of values are transmitted from the sensor to the control unit at a higher resolution. Again in paragraph [0014] the sensor values as divided into portions or ranges is described and the values in the second and third portion are stated as the trigger values. With regard to the transmission of the values at a higher resolution, paragraph [0013] indicates the use of different transmission rates and resolutions for the sensor values.

With regard to claim 8, the second range of values is selected from a lower half of the first range of values is claimed. As aforementioned, paragraph [0014] teaches the dividing of the values into ranges or portions, with the second and third range following the first range.

Claim 9 defines the method as executed by a transmitter module in the sensor. Ohl teaches the transmitting by the sensor in paragraph [0017] with the sensor including a transmitter block.

Claim 10 states that the method is executed by a receiver module in a control unit. Ohl includes a receiver block in the control unit as described in paragraph [0015].

Claim 13 states that the first range of values and the second range of values are successive. The range of values following one another in order is inherent to the

invention of Ohl especially since by definition “second” follows “first”, i.e. anything numbered first and second are ordered successively.

Based upon the aforementioned associations the limitations of the instant invention are anticipated and taught by the prior art to Ohl.

11. Claims 6-13 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. US 6,943,669 B2 to Otterbach et al.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Otterbach et al. (hereinafter referred to as “Otterbach”) teaches of a method for transmitting data from a sensor to a control unit similar to that of the instant invention.

Independent claim 6 sets forth the instant invention as a method for providing digital data transmission of sensor values from a sensor to a control unit, the sensor values generated from characteristics measured by the sensor (see abstract), comprising dividing the sensor values for data transmission at different resolutions, the sensor values forming a first range of values including successive sensor values (see Fig. 2 and col. 3:ll. 56 et seq. where the sensor values are divided; transmission at different resolutions is explained in col. 1, line 66 through col. 2, line 2); and dividing the

first range of values as a function of a variable relevant for the control unit (see col. 3: ll. 56 et seq.).

Claim 7 further defines the variable as a second range of sensor values for threshold values of a triggering algorithm for a restraining device, and the sensor values in the second range of values are transmitted from the sensor to the control unit at a higher resolution. Lines 38-40 of column 3 explain that the control unit is connected to a restraining system and the control unit triggers the restraint system for protection purposes. The cited paragraph continues to explain the use of algorithms and resolution rates for transmission of the data.

With regard to claim 8, the second range of values is selected from a lower half of the first range of values is claimed. As aforementioned, Fig. 2 and the text of column 2 beginning at line 52 teaches the dividing of the values into ranges or portions, with the second and third range following the first range.

Claim 9 defines the method as executed by a transmitter module in the sensor. Otterbach teaches the transmitting of values by the sensor in column 3 at lines 10-13 and in Fig. 1.

Claim 10 states that the method is executed by a receiver module in a control unit. Otterbach includes a receive module as described in col. 3, lines 27 onwards in reference to Fig. 1.

As per claim 11, the variable as a second range of sensor values for threshold values of a triggering algorithm for a restraining device, the sensor values in the second range of values transmitted from the sensor to the control unit at a higher resolution,-



lines 38-40 of column 3 explain that the control unit is connected to a restraining system and the control unit triggers the restraint system for protection purposes; also the cited paragraph continues to explain the use of algorithms and resolution rates for transmission of the data, the second range of values is selected from a lower half of the first range of values - Fig. 2 and the text of column 2 beginning at line 52 teaches the dividing of the values into ranges or portions, with the second and third range following the first range, and the operations are executed by a transmitter module in the sensor – taught in column 3 at lines 10-13 and in Fig. 1.

As with claim 12, the variable as a second range of sensor values for threshold values of a triggering algorithm for a restraining device, the sensor values in the second range of values transmitted from the sensor to the control unit at a higher resolution,- lines 38-40 of column 3 explain that the control unit is connected to a restraining system and the control unit triggers the restraint system for protection purposes; also the cited paragraph continues to explain the use of algorithms and resolution rates for transmission of the data, the second range of values is selected from a lower half of the first range of values - Fig. 2 and the text of column 2 beginning at line 52 teaches the dividing of the values into ranges or portions, with the second and third range following the first range, and the operations are executed by a receiver module in the control unit – taught in column 3 at lines 27 et seq. in reference to Fig. 1.

Claim 13 states that the first range of values and the second range of values are successive. The range of values following one another in order is inherent to the

invention of Otterbach especially since by definition “second” follows “first”, i.e. anything numbered first and second are ordered successively.

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication No. US 2005/0068195 A1 to Ohl et al. and/or US Patent No. US 6,943,669 B2 to Otterbach et al.

The limitations of claims 6 and 7, from which claims 14-15 depend, are shown to be taught by Ohl et al. (hereinafter referred to “Ohl”) and/or Otterbach et al. (hereinafter referred to as “Otterbach”) as aforementioned.

As per claim 14, the range of values which are transmitted at a higher resolution is in the lower half of a total range of the sensor values is stated. And claim 15 states that wherein a first half having lower values is distributed on a majority of possible transmission values, and a second half having higher values is linearly distributed on a remainder of the possible transmission values, so that the lower values are transmitted at a higher bit resolution and the higher values are transmitted at a lower bit resolution.

The limitation of the two claims regarding the transmission of the values at different resolutions is a mere statement of desired result, which has no clear support

within the claim language. Therefore, the claims are not clear with regard to how the transmitting is actually accomplished. As for the first half having lower values while the second half has higher values is considered to be design specific since the allocation of values to portions of a signal or stream of data is wholly dependent upon the design of the art. The references of prior art to either Ohl or Otterbach teach of dividing the data of the sensor signals and allocating certain parts to specific ranges as per each of the individual inventions require, which is considered to teach the limitations of the instant claims as the interpretation of the claim language is left open without having specific definitions to be adhered.

14. Claim 16 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication No. US 2005/0068195 A1 to Ohl et al. in view of US Patent No. US 6,944,526 B2 to Weichenberger.

Claim 16 states a method for providing digital data transmission of sensor values from a sensor to a control unit, the sensor values being generated from characteristics measured by the sensor, comprising dividing the sensor values for data transmission at different resolutions, the sensor values forming a first range of values including successive sensor values and dividing the first range of values as a function of a variable relevant for the control unit, wherein the variable is a second range of sensor values for threshold values of a triggering algorithm for a restraining device, wherein the first range of values and the second range of values are successive, wherein a first half having lower values is distributed on a majority of possible transmission values, and wherein a second half having higher values is linearly distributed on a remainder of the

possible transmission values, so that the lower values are transmitted at a higher bit resolution and the higher values are transmitted at a lower bit resolution. The dividing of the sensor values is taught by Ohl in paragraph [0014], where the dividing of the sensor data into various successive ranges is described. The aspect of associating of each of the range for the values with variables for different purposes as needed for the control unit is taught in paragraphs [0004-0012] by Ohl. In paragraph [0013] Ohl explains the transmitting of data at different resolutions and transmission rates. Furthermore, the limitation regarding the transmission of the values at different resolutions, specifically “the lower values are transmitted at a higher bit resolution and the higher values are transmitted at a lower bit resolution” is a mere statement of desired result, which has no clear support within the claim language. Therefore, the claims are not clear with regard to how the transmitting is actually accomplished. As for the first half having lower values while the second half has higher values is considered to be design specific since the allocation of values to portions of a signal or stream of data is wholly dependent upon the design of the art. The references of prior art to Ohl teaches of dividing the data of the sensor signals and allocating certain parts to specific ranges as per the inventions requirement. With regard to the use of the sensor values with a restraining device, Ohl does not specifically teach the use of such a device. However, the prior art of Weichenberger teaches the transmission of sensors for the acquisition of safety sensor data for the controlled activation of occupant protection devices, i.e. restraining devices, in column 1 at lines 42-45. It would have been obvious to one of ordinary skill in the art at the time of the invention to have included the

occupant protection device aspect as used by Weichenberger with the sensor data transmitting method in a motor vehicle as claimed by Ohl so as provide proper security and safety for occupants of motor vehicles by ensuring accurate transmission of signals for triggering activation of the safety device as is well known to one of skill.

Regarding claims 18 and 19, the control unit is stated as being one of a restraining arrangement and a vehicle dynamics control system, respectively. The prior art of Ohl teaches of a sensor to control unit data transmission method in a motor vehicle but does not specifically teach the use of a restraining device. However, the prior art of Weichenberger teaches the transmission of sensors for the acquisition of safety sensor data for the controlled activation of occupant protection devices, i.e. restraining devices, in column 1 at lines 42-45. It would have been obvious to one of ordinary skill in the art at the time of the invention to have included the occupant protection device aspect as used by Weichenberger with the sensor data transmitting method in a motor vehicle as claimed by Ohl so as provide proper security and safety for occupants of motor vehicles by ensuring accurate transmission of signals for triggering activation of the safety device as is well known to one of skill.

15. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication No. US 2005/0068195 A1 to Ohl et al. in view of US Patent No. US 6,944,526 B2 to Weichenberger, as applied to claim 16 above, and further in view of US Patent Application Publication No. US 2003/0076222 A1 to Fischer et al.

Claim 20 limits the control unit to be for a kinematic sensor system. Although, the prior art of Ohl teaches of a sensor to control unit data transmission method in a motor vehicle, the reference does not specifically teach the use of a kinematic sensor system. For this reason, the prior art of Fischer et al. (hereinafter referred to as "Fischer") is relied upon. Fischer teaches of a vehicle's pressure measurement device that includes a kinematic sensor in paragraphs [0023-0024] that is used to measure physical variables which are measured while the vehicle is in motion. It would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the kinematic sensor of Fischer with the methodology of Ohl and Weichenberger so as to enable measuring angular velocity and position relative space about one or more measurements as is well known to one of ordinary skill.

#### ***Allowable Subject Matter***

16. Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

17. Applicant's arguments filed on March 19, 2010 have been fully considered but they are not persuasive.

Applicant's arguments regarding the rejection of claims 6-12 are deemed to be non-persuasive, hence the rejections are maintained. As aforementioned, the claims lack a proper nexus between each of the steps stated in the proposed methodology.

The use of the first and/second sensor values seem to be varied in each step resulting in confusion and disparity. Also, Applicant states that inherency has been used in making the rejections of prior art. In response to both arguments, Examiner replies that the definitions of the elements are taught as presented by characterization given in and as best can be understood by the claims in view of the specification of the instant invention. The claim language has been given the broadest reasonable interpretation in view of the disclosure while the limitations as claimed are found to be anticipated and fairly suggested by the prior arts of record as stated herein above.

For the reasons stated above, the limitations of the instant invention are taught and/or fairly suggested by the prior arts of record; thereby, rendering the instant claims unpatentable.

### **Conclusion**

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. US 6,836,714 B1                      Nitschke et al.  
Teaches of a control unit that has access to measured data of sensors.

US Patent Application Publication No. US 2002/0016176 A1 Glaser  
Teaches of a method for extracting parts of data from a data signal.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela Rao whose telephone number is (571) 272-3751. The examiner can normally be reached Monday - Wednesday from 9:00 am to 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki, can be reached on (571) 272-3719. The fax number for the organization where this application or any proceeding papers has been assigned is (571) 273- 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. It should be noted that status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see [http:// pair-direct.uspto.gov](http://pair-direct.uspto.gov). Should any questions arise regarding access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SHEELA S. RAO/  
Examiner, Art Unit 2122  
September 29, 2011

/Kakali Chaki/  
Supervisory Patent Examiner, Art Unit 2122